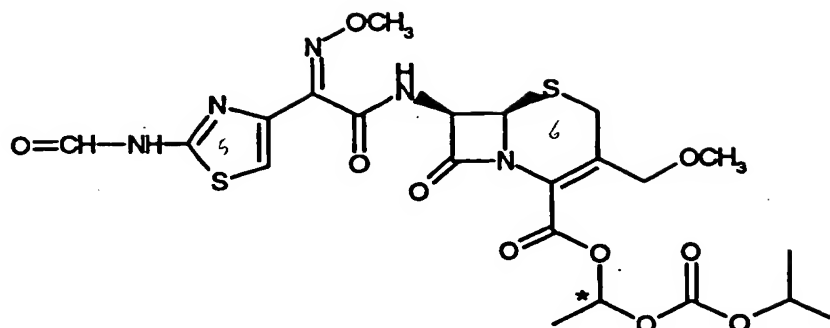


# Patent Claims

1. A compound of formula



in crystalline form.

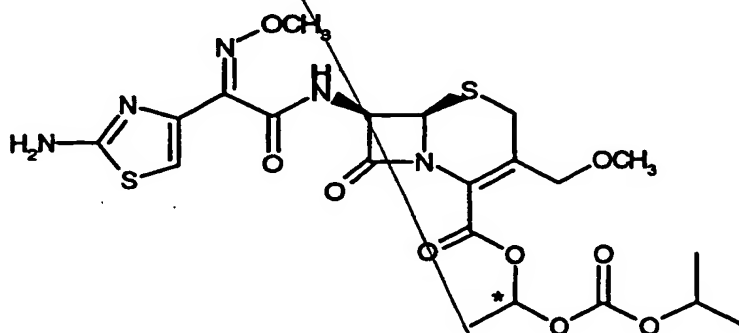
2. A mixture of diastereoisomers of a compound of formula I, as defined in claim 1, wherein the diastereoisomeric ratio B/(A+B), wherein B is the more apolar of the two diastereoisomers, is 0.5 to 0.6, the diastereoisomers being with respect with the carbon atom marked with a star in formula I, in crystalline form.

3. A process for the production of a compound of formula I in crystalline form comprising crystallizing a compound of formula I in organic solvent comprising a nitrile, or a ketone.

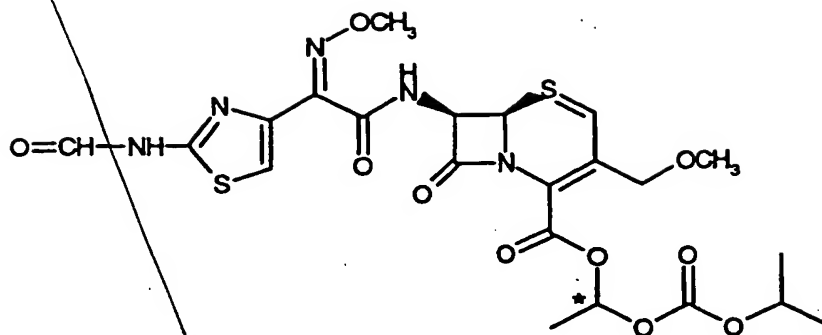
4. A process for the production of a mixture of diastereoisomers of a compound of formula I, as defined in claim 1, wherein the diastereoisomeric ratio B/(A+B), wherein B is the more apolar of the two diastereoisomers, is 0.5 to 0.6, the diastereoisomers being with respect with the carbon atom marked with a star in formula I, in crystalline form, comprising crystallizing a compound of formula I in organic solvent comprising a nitrile or a ketone; or mixtures thereof; and water.

5. Use of crystalline N-formyl cefpodoxime proxetil in the purification of cefpodoxime proxetil.

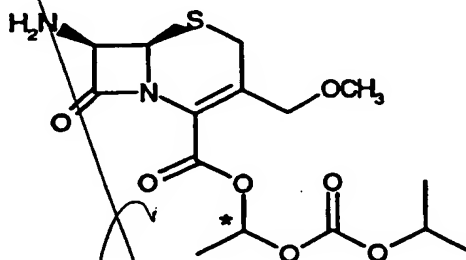
6. A process for the purification of cefpodoxime proxetil comprising producing a compound of formula I as defined in claim 1 and crystallizing in the presence of a nitrile or a ketone and converting a crystalline compound of formula I into cefpodoxime proxetil.
7. A process for the adjustment of the diastereoisomeric ratio  $B/(A+B)$  wherein B is the more apolar of the two diastereoisomers; of a mixture of diastereoisomers of cefpodoxime proxetil, the diastereoisomers being with respect with the carbon atom marked with a star in formula I, comprising crystallizing a compound of formula I from a mixture comprising water and either a nitrile or a ketone; or mixtures thereof; and converting a crystalline compound of formula I into cefpodoxime proxetil.
8. A process for the production of a mixture of diastereoisomers of cefpodoxime proxetil of formula



in a diastereoisomeric ratio  $B/(A+B)$ , wherein B is the more apolar of the two diastereoisomers, of 0.5 to 0.6, the diastereoisomers being with respect with the carbon atom marked with a star in formula II, comprising producing a mixture of diastereoisomers of a compound of formula



by acylating a compound of formula



III

with activated Z-(2-formamidothiazol-4-yl)-methoxyimino acetic acid, removing solvent from the reaction mixture obtained, crystallizing a compound of formula I in the residue obtained in the presence of a nitrile or a ketone, e.g. in the presence of water; isolating a compound of formula I in crystalline form and converting a compound of formula I by splitting off the formyl group from the amino group attached to the thiazolyl group, to obtain a compound of formula I, in the form of a diastereoisomeric mixture in a ratio of B/(A+B) of 0.5 to 0.6.

9. A process according to claim 8 wherein a compound of formula III is produced by esterifying 7-amino-3-methoxymethyl-3-cephem-4-carboxylic acid with a compound of formula



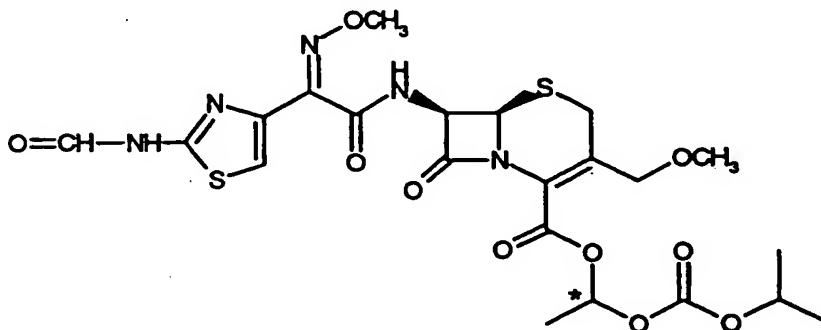
V

wherein X denotes a leaving group.

10. A process according to ~~any one of claims 3 to 9~~ wherein a nitrile is acetonitrile.

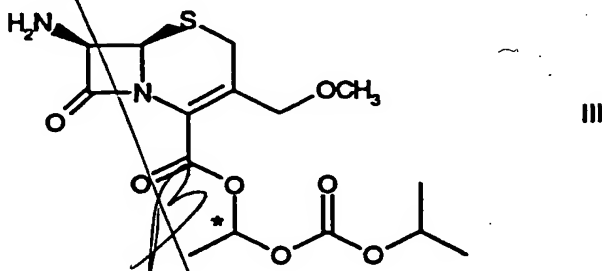
11. A process according to any one of claims 3 to 9 wherein a ketone is acetone.

12. Crystalline 7-[2-(2-formylaminothiazol-4-yl)-2-(Z)-(methoxyimino)acetamido]-3-methoxymethyl-3-cephem-4-carboxylic acid-1-(isopropoxycarbonyloxy)ethyl ester of formula

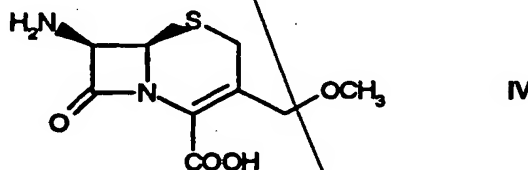


as a diastereoisomeric mixture of formula I (\*signifies the asymmetric centre).

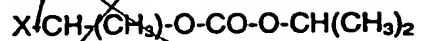
13. Process for the production of the diastereoisomeric mixture of formula I, whereby a compound of formula



is acylated with a reactive derivative of (2-N-formylaminothiazol-4-yl)-2-(Z)-(methoxyimino)-acetic acid and the compound of formula I is crystallised in water and a (C<sub>1-4</sub>)nitrile or water and a (C<sub>3-5</sub>)ketone, e.g. whereby the compound of formula III is produced by the esterification of 7-amino-3-methoxymethyl-3-cephem-4-carboxylic acid of formula



with a compound of formula



V

5

wherein X signifies a leaving group, in the presence of a base.

add Cl  $\rightarrow$  FIRST

add  
Br  $\rightarrow$  second

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